Riparian Forest Buffer Description

Definition: A riparian forest buffer is an area of trees and shrubs located adjacent to streams, lakes, ponds, and wetlands.

Purpose: Woody vegetation in buffers provides food and cover for wildlife, helps lower water temperatures by shading waterbody, and slows out-of-bank flood flows.

Conservation Management System: Riparian forest buffers are normally established concurrently with other practices as part of a conservation management system.

Wildlife Benefits: Connecting a buffer with existing perennial vegetation, such as woodlots and woody draws (tree/shrub establishment) or hedgerows (windbreak/shelterbelt establishment) benefits wildlife and aesthetics.

How to Design a Riparian Forest Buffer

General Requirements: The most effective riparian forest buffer strip has three zones of vegetation, each planted parallel to the stream. The recommended width of the buffer strip depends on many factors including slope, soil type, farming practices, size of crop fields, and the landowner's objectives.

Zone 1/Tree Zone Next to Stream: This zone is 30-foot wide and is closest to the stream. Four or five rows of trees are recommended in this zone. Trees nearest the stream are selected for the ability to quickly develop roots that can increase bank stability. In the outer area of the tree zone hardwoods can be planted to produce high-value timber.

Zone 2/Shrub Zone: The middle zone is 12-foot wide and consists of shrubs. Shrubs also develop a perennial root system, add diversity and wildlife habitat to the ecosystem, and help slow floodwater when the stream leaves its channel. One or two rows of shrubs are recommended.

Zone 3/Grass Zone: Farthest from the stream and next to the cropland is a 20-24 foot wide strip of native warm-season grasses or shrubs. The warm season grass zone is located on the outside of the buffer strip nearest the field crop.